Federal Aviation Administration
Air Traffic Airspace Branch, ASW-520
2601 Meacham Blvd.
Fort Worth, TX 76137-0520

Aeronautical Study No.
2006-AAL-177-OE

Issued Date: 08/25/2006

Brfent Petrie
Alaska Village Electric Co-op
4831 Eagle Street
Anchorage, AK 99503

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has completed an aeronautical study under the provisions of 49 U.S.C., Section 44718 and, if applicable, Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	# 2
Location:	Savoonga, AK
Latitude:	63-41-29.20 N NAD 83
Longitude:	170-29-53.42 W
Heights:	148 feet above ground level (AGL) 208 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory Circular 70/7460-1 AC 70/7460-1K, Obstruction Marking and Lighting, red lights - Chapters 4,5(Red),&12

It is required that the enclosed FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

____ At least 10 days prior to start of construction
(7460-2, Part I)

_X__ Within 5 days after the construction reaches its greatest height
(7460-2, Part II)

See attachment for additional condition(s) or information.

This determination expires on 02/25/2008 unless:

(a) extended, revised or terminated by the issuing office.
(b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION

MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before September 24, 2006. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted in triplicate to the Manager, Airspace and Rules Division - Room 423, Federal Aviation Administration, 800 Independence Ave, Washington, D.C. 20591.

This determination becomes final on October 4, 2006 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Office of Airspace and Rules via telephone -- 202-267-8783 - or facsimile 202-267-9328.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (202)267-9219. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2006-AAL-177-OE.

Signature Control No: 475198-486922 (DNH)

Kevin P. Haggerty
Manager, Obstruction Evaluation Service

Attachment(s)
Additional Information

7460-2 Attached

NARRATIVE AERONAUTICAL STUDY NO. 2006-AAL-176 and 177-OE

Abbreviations
AGL - above ground level MSL - mean sea level RWY - runway
IFR - instrument flight rules VFR - visual flight rules nm - nautical mile
Part 77 - 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION
The proposed 148 AGL (208 MSL) Vestas 27 wind turbine is one of a project of two wind turbines and this one would be located approximately 2334 feet north northeast of the RWY 23 threshold at Savoonga airport (SVA), Alaska. It would be located west of the old land fill and is about 545 from the coast. SVA RWY 23 threshold elevation: 50 MSL.

2. OBSTRUCTION STANDARDS EXCEEDED
This proposed wind turbine is identified as an obstruction under Part 77 Section 77.25(a) The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.23, 77.25, or 77.29; exceeds the VFR maneuvering areas for Category A and Category B aircraft (horizontal surface) at SVA RWY 23 by five (5) feet. The other wind turbine does not exceed Part 77 standards.

3. EFFECT ON AERONAUTICAL OPERATIONS
a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows:
Adverse Impact - This proposed wind turbine would exceed the Part 77 horizontal surface by 5 feet.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: None, provided an as built survey is submitted with a vertical accuracy of 20 feet and a horizontal accuracy of 50 feet. Both wind turbines were evaluated for VOR interference and VOR modeling indicated the signal remained within tolerances.

c. The impact on all-existing public-use airports and aeronautical facilities follows: None.

d. The impact on all planned public-use airports and aeronautical facilities follow: None.

e. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

4. CIRCULATION AND COMMENTS RECEIVED
The proposal was not circulated for public comment based upon the results of an internal aeronautical study. The FAA worked with the proponent on the wind turbine project siting for the best locations to minimize VOR signal disruptions.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION
It is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION
One of the two proposed wind turbines would exceed Part 77 horizontal surface by 5 feet. The VOR signal remained within tolerances during the modeling evaluations. The impact of the proposed structures can be mitigated with obstruction marking and lighting.

7. CONDITIONS
Wind turbine lighting systems SHALL BE SYNCHRONIZED so that they flash simultaneously. Turbines shall be lit with a single flashing red beacon (L-864) system in accordance with FAA Advisory Circular 70/7460-1K, Obstruction Marking and Lighting, Chapters 4, 5, & 12. The advisory circular is available online at http://www.faa.gov/ats/ata/ai/AC70_7460_1K.pdf. It is also free of charge, from the Department of Transportation, Subsequent Distribution Section, M-494.3, 400 7th Street, SW, Washington, DC 20590.

Turbines shall also be painted white in order to utilize the single red obstruction lighting system in accordance with the FAA Technical Notice TN05-50.

Within ten days after the structure reaches its greatest height, proponent is required to file a FAA form 7460-2, Actual Construction notification, at the OE/AAA website (http://oeaaa.faa.gov). The Actual Construction notifications along with the attached surveys will be the source documents for the National Aeronautical Charting Office (NACO) to chart the wind turbines on sectional charts and add them to the national obstruction database.

Provide a signed, certified engineering/survey data from a professional engineer, architect or surveyor on the certifier's letterhead regarding each proposed wind turbine site location & height in the following exact format below:

For Aeronautical Study No. 2006-AAL-(xxx)-OE, I certify that the latitude _____ and longitude _____ are accurate within +/- 50 feet horizontally; and the site elevation of _____feet AMSL is accurate within +/- 20 feet vertically. With a structure height of _____feet AGL, the overall height is _____feet AMSL. The horizontal datum (coordinates) are in terms of the North American Datum of 1983 (NAD83) and expressed as degrees, minutes and seconds. The vertical datum heights are in terms of the National Geodetic Vertical Datum of 1988, and are determined to the nearest foot.

SIGNED: _____
(Professional Engineering Title (REQUIRED))
(With seal imprint)

PRINTED: _____

To fill this survey data requirement, each wind turbine survey should be attached to its Aeronautical Study Number via an electronic upload (adobe pdf only) at the OE/AAA website (http://oeaaa.faa.gov).

The surveys are required to ensure the existing lowest minimums for the SVA instrument approaches are not adversely effected.

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